

AMENDMENTS TO THE ABSTRACT

Please replace the abstract at page 19 with the following amended abstract:

~~A~~ In an embodiment of a method of determining a ~~set of variables to receive~~ value changes for a placement variable as part of a local search solution to an integer programming problem that models placement of services of a distributed application onto nodes of a distributed resource infrastructure. ~~The method can be used where a constraint has one or more polynomial terms of at least second order. In an embodiment of the present invention~~ an unsatisfied communication constraint is selected. The unsatisfied communication constraint includes a sum of terms where at least some of the terms comprise products of placement variables. Stores are created for allowable changes of value for the variables in the unsatisfied communication constraint. The unsatisfied communication constraint is parsed through by term. For each variable in a term, the stores are updated with a change in the term for each of the allowable changes of the value while maintaining other variables constant. A variable to receive the value change, and possibly a value for the variable, are chosen based upon the store which meets at least one improvement criterion.